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Trend Analysis of Nepalese Banks from 2005-2010

An Honors Thesis

Presented to

The Department of Economics and Finance

Of the University of New Orleans

In Partial Fulfillment

Of the Requirement for the Degree of

Bachelor of Science in Finance, with University Honors

and Honors in Finance

By Manish Sapkota

May 2012

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Abstract

The purpose of this paper is to examine the banking industry of Nepal from 2005 to 2010 to track the causes of banking crisis of 2011 using theories of macro-economics and finance as a conceptual starting point. In 2011, several commercial and development banks faced severe liquidity crisis that caused panic in the general public. Banks lost large amount of money in their loan and investment portfolios, which compelled the Government of Nepal to inject liquidity in the market. In the recent past years leading to the banking crisis of 2011, there was rapid change in the size and activity of banking industry. This paper analyzes changes that occurred in the financial market in the period of 2005 to 2010 that triggered the banking crisis. The roles of remittance, credit expansion and asset bubble have been analyzed in terms of their connection to the liquidity crisis.

Key terms:

Nepal Rastriya Bank, Credit Expansion, Remittance, Asset Bubble, Real Estate Market

Acronyms

BFI	Bank and Financial Institution
BOP	Balance of Payments
CPI	Consumer Price Index
IMF	International Monetary Fund
MoF	Ministry of Finance
NGO	Non-Governmental Organization
NPL	Non-Performing Loans
NRB	Nepal Rastriya Bank
Rs	Rupees

Introduction

Nepal Rastra Bank, the central bank of Nepal, has stated in its Monetary Policy Report for 2011-2012 that “ the present monetary policy is being implemented at a time of continued Balance of Payments (BOP) deficit, high inflation, liquidity crisis and high credit-deposit ratio in the banking sector, slowdown in real estate and share market activities, liquidity problem arising from excessive lending by some financial institutions and a sizable part of general people lacking access to formal financial services.”¹ This statement sums up the precarious situation of the financial system of Nepal in the present context. Not often in the history of Nepal, have the government and the central bank had to deal with increasing inflation and slowing economic growth at the same time. On top of that, state of international trade looks miserable. Consistent balance of payment deficit has given policymakers something to think about.

In recent years, the economy has taken a negative turn, thanks to the financial mess created by the banking sector and other adversities such as rising prices of oil. It's not that Nepalese banking sector has been the strongest in the South-Asian region but it is probably the first time when the entire system is engulfed with so many problems oozing out of Nepalese banks. While central banks around the world are trying to rescue their financial system from global economic crisis of 2008, Nepalese banks were shielded from any external attacks due to lack of exposure to global financial system². Economists believed that Nepalese economy would not be severely

¹ Nepal Rastra Bank,” Monetary Policy Report 2011”, Kathmandu: Nepal Rastra Bank.

² Karshenas, M (2009), “The Impact of the Global Financial and Economic Crisis on LDC Economies”, Report prepared for the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developed Countries and Small Island Developing States (UN-OHRLLS), New York: UN-OHRLLS.

affected by the global economic crisis but the recent Nepalese Banking Crisis was generated strongly from the inside not outside. While the banks have been quick enough to point fingers at the inability of the government to formulate effective policies, the Nepalese government has criticized the practice of poor risk management in banking system.

The banking crisis that started in mid-2011 became one of the worst disasters that the financial market of Nepal has ever witnessed. When big players of the market such as- Nepal Share Markets Finance Limited, Peoples' Finance Limited and Vibor Bikas Bank surrendered to the arms of Nepal Rastra Bank, the long slumbering financial market went into a state of panic³. Banks run on confidence and when one fails, odds are high that several others fail too. When Vibor Bikas Bank, previously seen as the leader of the industry and possibly the healthiest development bank, collapsed due to lack of liquid assets there was severe anxiety among depositors of other banks too. When masses of suspicious depositors knocked at the doors of their respective banks to collect their money, liquidity crunch ensued and the banking industry was shaken. As in the case of United States, the central bank had to intervene and inject liquidity in the panicking market to bring some serenity among consumers, investors and depositors.

Blogger Chandan Sapkota has aptly cited rescue of Vibor Bikas Bank as similar to 'Northern Rock Moment'- the infamous incident when the Bank of England was compelled to step in the free capitalist market to salvage Northern Rock Bank, one of the most profitable mortgage lenders, from sudden collapse. Nepal Rastra Bank provided short term loan of Rs 500 million to

³ Sapkota, Chandan (2011), "Nepalese Banking Crisis Explained", Journal of Institute of Chartered Accountants of Nepal, Vol. 8, No.4.

Vibor Bikas Bank and fulfilled its duty as a lender of last resort⁴. Vibor Bikas Bank was not the only bank that came into verge of collapse due to liquidity crunch. There were other financial institutions that dived into sea of trouble- Nepal Development Bank, Samjhana Finance, United Development Bank, Gorkha Development Bank, and Nepal Bangladesh Bank, for example. Nepal Rastra Bank quickly took control and tried to bring stability in the market. “To avoid systemic risk on payment system, NRB [provided] liquidity through open market operation; lender of last resort facility; refinance facility for liquidity management and standing liquidity facility to banks and financial institutions facing liquidity problem due to systemic and structural reasons.”⁵ After the turmoil in financial sector, questions have been asked about viability, sustainability and quality of various banks.

Kaminsky and Reinhart have argued that large credit expansion and financial liberalization generally precede an asset bubble. They also mention that stock prices go up and real estate asset prices soar up too. After the bubble bursts, stock market crashes and asset prices plummet.⁶ As we shall see in later sections, there was credit expansion during 2005-2010 in Nepal which led to an asset bubble. The bursting of the asset bubble caused banking crisis in the subsequent year.

⁴ Sharma, M. M. (2011, June 9), “Sinking Vibor Bank Seeks Mgmt by NRB”, Republica Daily, p. 8.

⁵ Nepal Rastra Bank,” Monetary Policy Report 2010”, Kathmandu: Nepal Rastra Bank.

⁶ Kaminsky, G. and C. Reinhart (1999), “The Twin Crises: The Causes of Banking and Balance of- Payments Problems,” American Economic Review 89, 473-500.

History of Banking

Banking system in Nepal is relatively new compared to countries around the globe. The first bank established in Nepal was Nepal Bank Limited (NBL) in 1937. However, for nineteen years after the establishment of the first commercial bank NBL there was no central bank in the country. In 1956, the central bank Nepal Rastra Bank, was established and hence there was a central authority of the financial sector. In 1966, Government of Nepal established Rastriya Banijya Bank, the largest commercial bank in Nepal.⁷

Two decades later in 1984, financial liberalization commenced. Several sweeping changes and reforms were made in the financial system. Competitiveness in the financial market was given the top priority. Barriers to entry in the financial markets were removed in the process. “This was done mainly to attract private joint venture banks with foreign collaboration with the hope that such banks would bring in much needed foreign capital and technical know-how, infuse modern banking skills to the domestic banks, and, widen as well as deepen the national financial structure.”⁸ Financial liberalization led to the establishment of a few finance companies, development banks and commercial banks. In the same year, interest rates were also deregulated. Now, the banks were allowed to set their own deposit rates and loan rates. “The objective of interest rate deregulation was to let the market decide the true cost of capital, keep real deposit

⁷ Sapkota, Chandan (2011), “Nepalese Banking Crisis Explained”, Journal of Institute of Chartered Accountants of Nepal, Vol. 8, No.4.

⁸ Acharya, Sharma, Thapa (1998, “Economic Liberalisation in Nepal: Sequence and Process”, Kathmandu, National Labor Academy and Oxfam GB-Nepal.

rates positive, thereby, stimulating savings and creating a competitive environment in the financial system so as to benefit both the depositors and borrowers.”⁹

There were other important reforms that were crucial to the health of capital and money markets. Government introduced the auctioning of treasury bills which was a necessary step to check excess liquidity in the market¹⁰. Previously, commercial banks were reluctant to hold treasury bills because such securities yielded lower returns. Once the action was taken, banks were willing to hold default free treasury bills and add some liquid assets to their portfolio. Through this process, government gained more control in the flow of money supply and, consequently, in the general price level.

One of the most important reforms during the financial liberalization was the introduction of prudential norms. Banking system was well defined and shaped after the norms were put into practice. Nepal Rastra bank, the central bank, set up certain requirements such as capital adequacy requirement, loan loss provisioning, interest income recognition, loan classification, and income disclosure requirement¹¹. This particular move is seen as a landmark in the development of financial sector because it made the banking system transparent and credible to a large extent. Prudential norms have been changed and modified with the passage of time to accommodate the changes occurring in the financial world.

The central bank also decided to switch its monetary policy stance from direct to indirect to encourage banks to flourish. After financial liberalization, interest rate was deregulated and credit ceilings were removed. Basically, the policy makers handed greater power to the market

⁹ Khatiwada, Yuba Raj (1999). "An Overview of Financial Liberalization and Agenda for Further Reforms", Do We Need Economic Reforms Phase II, Kathmandu, Institute for Integrated Development Studies.

¹⁰ Pyakuryal, Bishwambher (2002), "Financial Sector Reform in Nepal: Needs and Challenges", SEACEN Workshop on Macroeconomic Management, Pokhara, Nepal.

¹¹ Shrestha, Min B. and Khorshed Chowdhury (2007), "The Impact of Financial Liberalisation on Welfare: Evidence from Nepal," Applied Econometrics and International Development.

and showed their trust in the self-regulating mechanism of the invisible hands or the forces of demand and supply. Now, the central bank could only influence price and interest rates through bank rate, cash reserve requirement and open market operations. The financial system moved towards a capitalist market system where market power is vested in the hands of consumers, depositors and the investors. In 2001, Nepal Rastra Bank (NRB) gained autonomous status. It was no longer under government control. NRB could now work independently and could manage financial sector and monetary policies simultaneously.

While the financial sector was moving in a new direction, the government owned banks-- Nepal Bank Limited and Rastriya Banijya Bank-- were losing their grips in the market. These banks were going through continuous loss and required acute measures to keep them from collapsing. With the support of World Bank, the management of these banks was handed to foreign administration. Restructuring process was carried out to improve deteriorating health of these financial institutions.¹² NRB demonstrated its support to foreign ventures and openly admitted that the infant Nepalese banking industry needed guidance and assistance from foreign experts. Hence, by all counts, policymakers showed their determination to direct financial sector from traditional methods toward modern ways.

¹² Shrestha, Min B (2005) "Financial Liberalisation in Nepal", Ph.D. Thesis, School of Economics, University of Wollongong.

Growth of Banks

As the Nepalese financial sector expanded, financial institutions felt a need to differentiate from each other. As a result, the degree of homogeneity in the market gradually declined. The expansion of financial market can be credited to some major forces at work. “Technical change has reduced the cost of communication and computation, as well as the cost of acquiring, processing, and storing information. Deregulation has removed artificial barriers preventing entry or competition between products, institutions, markets and jurisdictions. Finally, the process of institutional change has created new entities within the financial sector”.¹³ Due to increasing diversity in the activities of financial institutions, the Ministry of Finance has divided the financial sector into two groups based on their primary functions: banking sector and non-banking sector. Banking sector is composed of NRB, the central bank and all the commercial banks.¹⁴ The non-banking sector comprises:

- Financial institutions that were granted license by NRB, which includes Finance Companies, Development Banks, Micro-finance Development Banks, Co-operative Financial Institutions, and Non-Governmental Organizations (NGOs) involved in minor banking activities
- Those financial institutions that were not licensed by NRB, such as Insurance Companies, Employee’s Provident Fund, Citizen Investment Trust, Postal Saving Offices and Nepal Stock Exchange.

¹³ Rajan, Raghuram G. (2005), “Has Financial Development Made the World Riskier?”, Proceedings of the Jackson Hole Conference organized by the Kansas Fed.

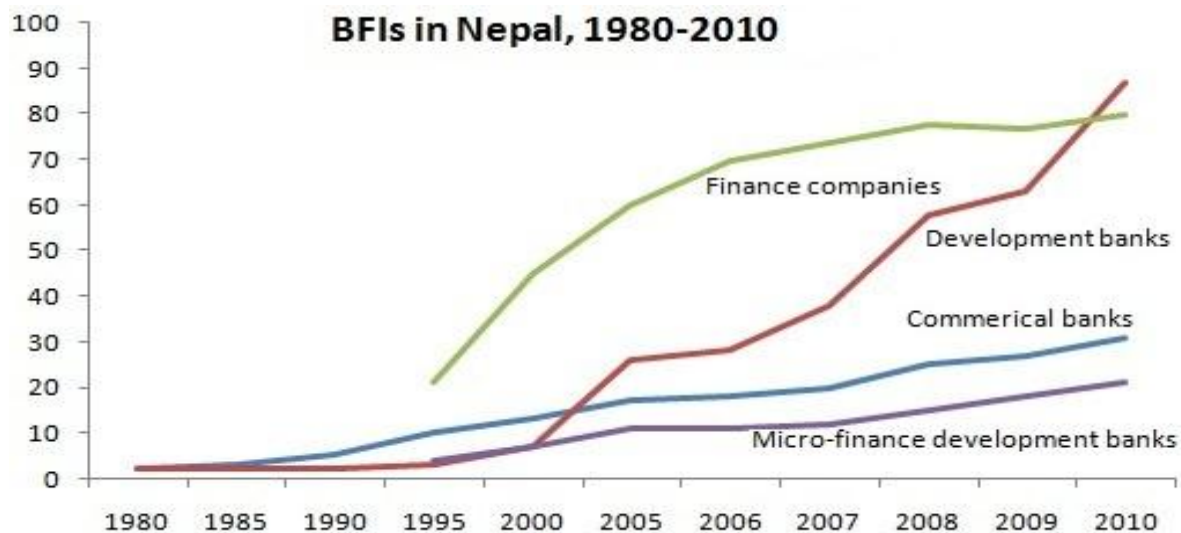
¹⁴ Nepal Rastra Bank, “Banking and Financial Statistics July 2010”, Kathmandu: Nepal Rastra Bank.

The Ministry of Finance has made its top priority to increase accessibility of financial services to all parts of the country.¹⁵ To promote outreach of financial services to every nook and corner of Nepal, the Cooperative Act was promulgated in 1992. As it stands now, there are 10558 saving and credit cooperatives which have contributed immensely in supplying loans to needy borrowers in underprivileged regions and also mobilized savings in promising investment sectors. The financial liberalization could not spread financial services to all the regions as expected. Policymakers have realized and acknowledged the importance and the potential of micro-finance in financial outreach. They set up an independent Micro-finance Development Fund to cater to the needs of the deprived. As already proven in neighboring countries like India and Bangladesh, micro-finance successfully provides the channel to make financial services available to people of underprivileged class, region, and gender. Hence, Micro-finance Authority Act is in the pipeline to be fully embraced by the Government of Nepal.

¹⁵ Ministry of Finance (2011),” Economic Survey 2010/11 ”” Kathmandu: Ministry of Finance, Government of Nepal.

Credit Expansion

As the banking sector expanded and new avenues opened up in the financial market, there was rapid credit growth especially from the year 2006-07 to 2009-10. It is no coincidence that the increase in number of financial institutions such as development banks and finance companies occurred at the same time as the increase in credit. Large number of banks popped in the later years to compete for the rising amount of remittance flowing to the country. As the income flowing from outside the country increased, the financial sector opened up to new levels to exploit hot money¹⁶ and make profits. Detailed analysis about the impact of surge of remittance to the financial sector will be done in later section. As it can be observed, the number of development banks increased by astonishing 1030% from 2000 to 2010.



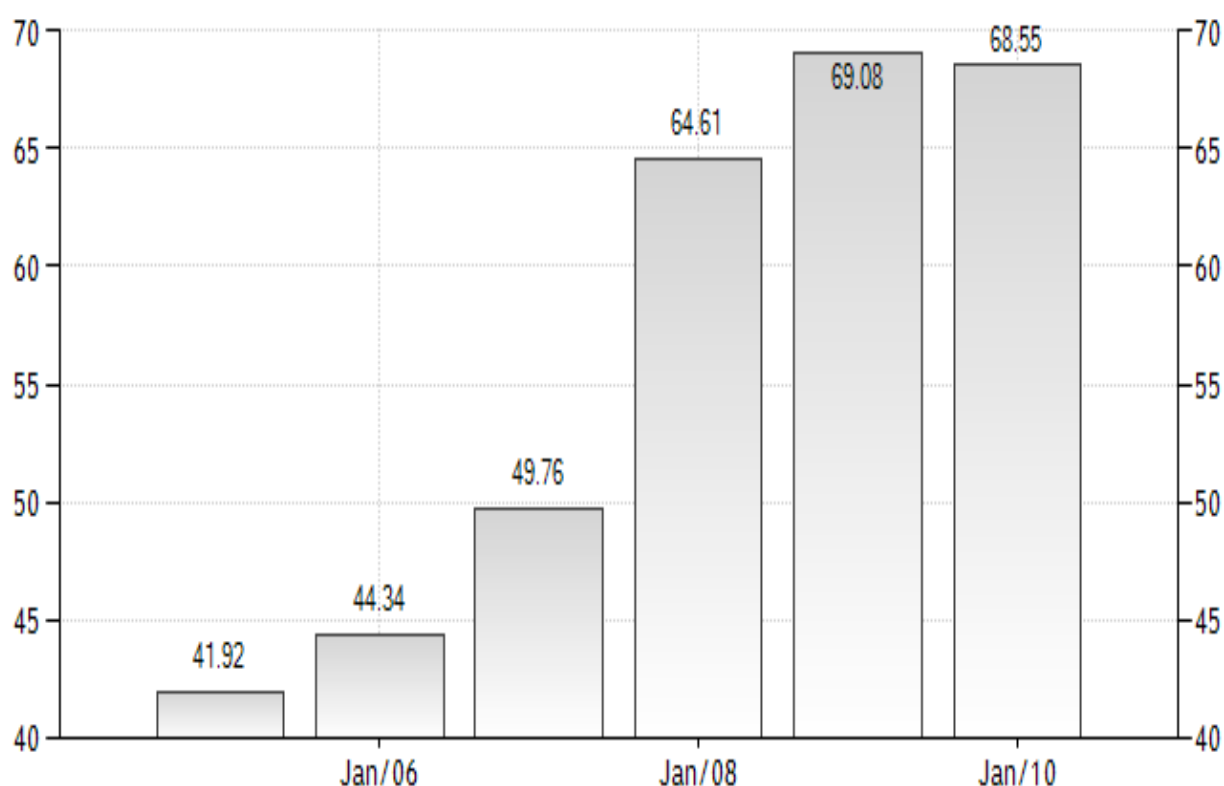
BFI means banks and financial institutions. Categories A, B, C & D means Commercial, Development, Finance and Micro-finance, respectively, financial institutions.

Source: Sapkota, Chandan (2011), "Nepalese Banking Crisis Explained", Journal of Chartered Accountants of Nepal

¹⁶ Investopedia defines hot money as money that flows regularly between financial markets as investors attempt to ensure they get the highest short-term interest rates possible.

With the increase in number of financial institutions, borrowing and lending activities in the financial sector also accelerated. As the money supply swelled, the number of bank deposits made by the customers went up dramatically. Banks were in keen search of domestic investment opportunities. In order to make profits from the money of the customers, banks increased their lending activities which led to upsurge of credit.

Domestic Credit Provided By Banking Sector (Percentage of GDP) in Nepal 2005-2010



Domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The banking sector includes monetary authorities and deposit money banks, as well as other banking institutions where data are available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits).

Source: Data obtained from the website of World Bank.

As the graph shows, there was a steady rise in credit growth from 2005-06. The rate of growth increased dramatically in 2008. The GDP of Nepal has been increasing every year. Credit growth accelerated even faster in the years 2006-2009. It comes as no surprise that proliferation of financial institutions was an automatic response to rising profitability in the banking industry.

The financial sector is intricately connected to all other sectors such as politics, education, transportation, entertainment and various others. When there is sudden change in the structure and the volume of activity in an important sector like financial sector, the newly created waves travel through all the sectors. Such tremors disturb the equilibrium of the entire economy and inevitably affect the lives of the citizens. For example, Dell'Ariccia, Detragiache and Rajan (2008)¹⁷ prove that problems in banking system lead to a decline in credit and to decrease in GDP growth. They clearly show us that those sectors that rely heavily on external finance fare far worse during banking crises. Therefore, dramatic credit growth is said to carry systemic risks which can bring down an entire economy.

In the following section, we will discuss the role of remittance in the formation of credit boom. Such credit booms occur in financial markets almost every year in different parts of the world. Not all credit booms lead to financial disaster, but some of them are definitely recipes of disaster. As seen in retrospect, the credit boom that took place in Nepalese financial markets led to disastrous consequences.

¹⁷ Dell'Ariccia, G., E. Detragiache, and R. Rajan (2008), "The Real Effects of Banking Crises", Journal of Financial Intermediation 17, 89-112

Impact of Remittance from 2005-2010

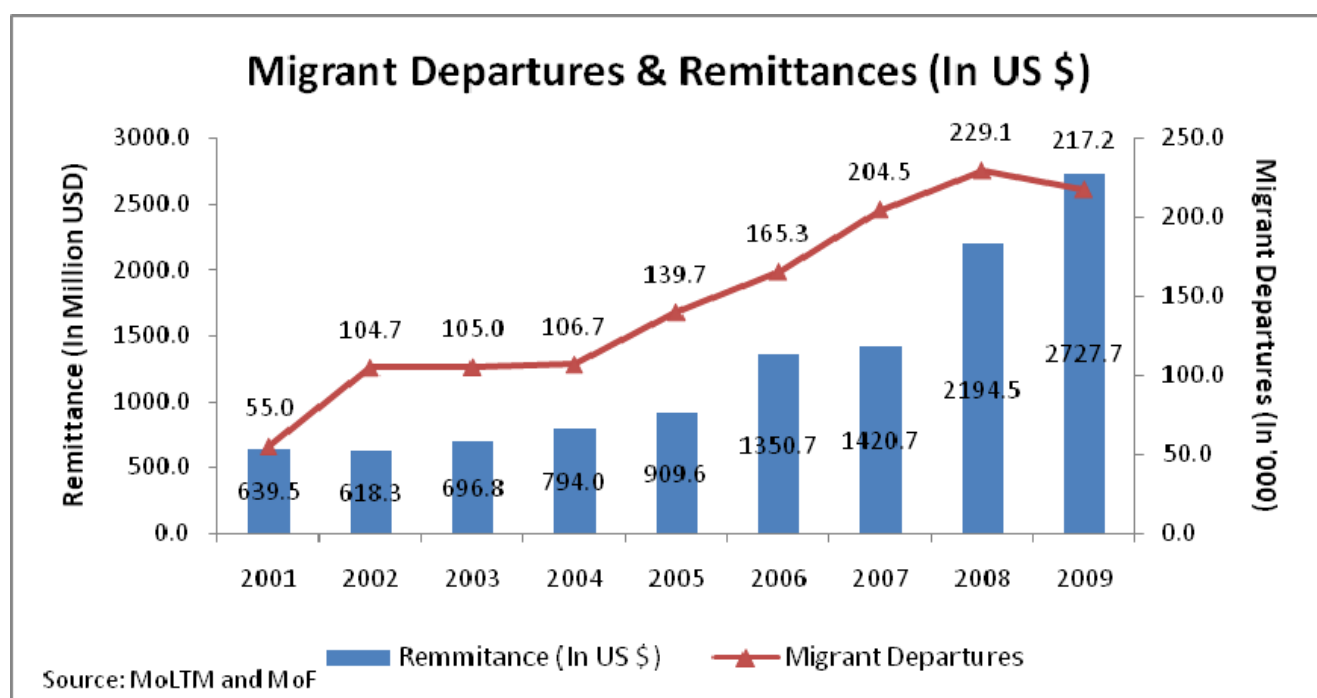
The concept of banking system is built around extracting funds from the ones who do not want to use them and supplying those funds to the needy ones. In the process, banks manage to make some profit for bearing the risk. Like all financial intermediaries, banks borrow money from the depositors and capital markets and invest the funds in lucrative investment opportunities.

However, the banking system around the world has taken massive leaps and has gone beyond performing basic function of borrowing and lending. Financial intermediaries today have blurred the lines that separated financial institutions which performed some specific tasks only. Even in developing countries like Nepal, finance companies have started to take up roles of commercial banks. Such companies maintain large deposits like commercial banks and are active lenders in the financial markets. Thus, all financial intermediaries look alike in their daily activities and often compete with each other for acquiring funds. As a result, there is a cut throat competition among financial institutions to secure funds from different sources¹⁸. Remittance became a major source of fund for all the financial institutions after 2000. In the recent years, especially after 2005, there has been rapid increase in the growth of remittances.¹⁹ Every year, thousands of Nepalese citizens leave their homes to work abroad. The job market in the country was not able to find its feet due to an instable political environment. While the domestic job market was struggling to accommodate all the people who were willing to work, foreign job market was in constant demand of cheap labor force. Oil producing countries such as Saudi Arabia, Kuwait,

¹⁸ Sapkota, Chandan (2011), "Nepalese Banking Crisis Explained", Journal of Institute of Chartered Accountants of Nepal, Vol. 8, No.4.

¹⁹World Bank (2010), "Nepal Economic Update", Economic Policy and Poverty Team, South Asia Region, Washington DC: World Bank.

Qatar and South East Asian countries like Malaysia, Philippines demanded workers from outside their country to work for their businesses. There was a rising demand for workers in developed Asian countries like Japan and Korea too. This situation opened gates for thousands of youths who were without jobs. Consequently, the number of Nepalese people going abroad jumped in the years from 2004-2009.



Source: Almekinders and Abenoja (2010), Remittances in South Asia and the Philippines: Determinants and Outlook, IMF.

As can be observed, there was a sharp incline in the number of migrants after 2004. The number continued to rise till 2009. The number of migrant is significantly large for a country the size of Nepal. The flow of remittance also increased after 2005. As the migrants settled in their place of work, they began sending money back home. The role of remittance in Nepalese economy is highly significant. When all sectors of the country were limping and the internal activities were not generating sufficient income, remittance flowed in to salvage the economy.

The progress made by the economy has been largely based on revenue generated outside the boundaries of the country as opposed to revenue generated internally. The situation is fragile because Nepal has to depend on activities outside its control. For example,- if Nepalese currency were to get stronger than Saudi Riyal then there would be vast amount of loss in remittance. This would have far reaching repercussions because there would be a number of sectors other than financial such as household sector that will be relying on the money coming into the economy from outside.

Remittance has negative effects on the banking sector too. As seen in different countries, remittance discourages people to work and increases dependence. People are more willing to accept the money coming from abroad, rather than look out for jobs themselves. This introduces moral hazard problem in the market when applied in macro-economic sense.

“Normally entrepreneurs and investors shoulder a great deal of risk when opening and developing fledgling business endeavors, primarily derived from the fact that many businesses do not survive in the medium or long run. But when these endeavors are funded by remittances instead of savings from one’s own labor, entrepreneurs may be more willing to start a business that has less chance of succeeding. As a source for business capital, then, remittances may subsidize non-viable enterprises in an impermanent way.”²⁰

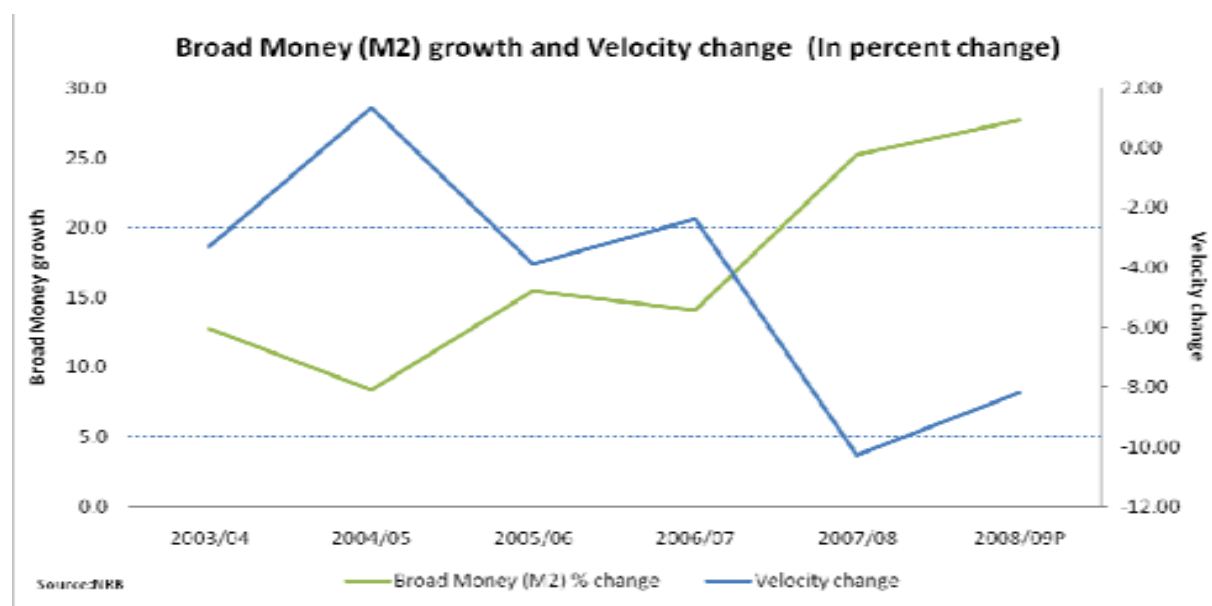
As the phenomenon above undertakes, banking industry may crumble due to lack of viable investment opportunities. Banks are in need of lucrative investment opportunities to multiply their profits and keep stakeholders happy. This becomes a challenge when the internal investment environment is unhealthy.

²⁰ Lopez, Jose Roberto, et al. (1991). Small Business Development in El Salvador, p.19

Even though large sums of money flow into the economy and the number of deposits rise with time, economists warn about the danger remittance presents to the market equilibrium. Sudden increase in the inflow of money can cause exchange rates to appreciate or overvalue.

“Remittances tend to drive up the price of non-tradable goods relative to that of tradable ones and therefore contribute to a real appreciation of the exchange rate.”²¹ A developing country such as Nepal cannot afford to control vigorous swings in currency value because it does not have enough resources to rectify the movement. Moreover, Nepal has been suffering through a balance of trade deficits and further appreciation of currency only magnifies the deficit. Nepalese economy primarily relies on agricultural exports. Currency appreciation will make these exports less competitive in the international market.

In the Nepalese scenario, remittance has increased supply of money.



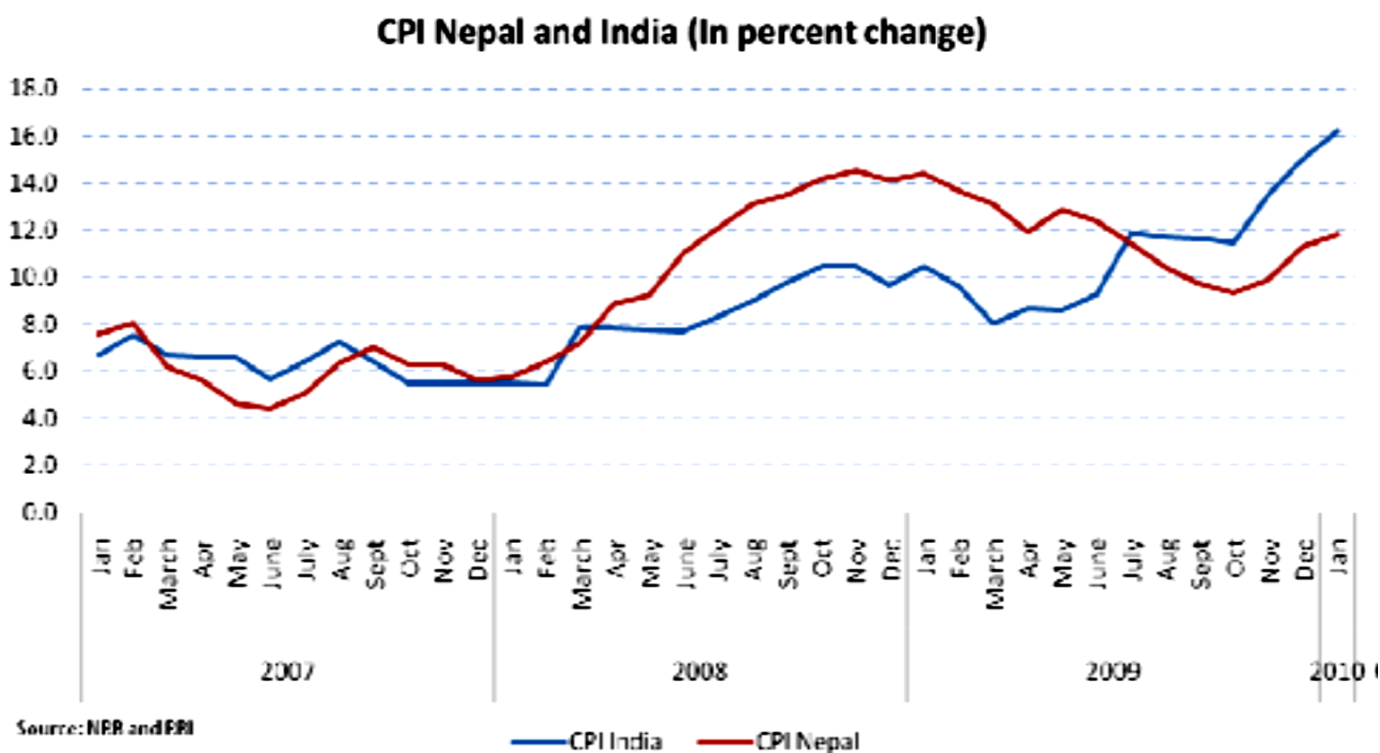
Source: IMF Document

Money supply was rising steadily from 2005 onwards. Money supply went through a significant growth in the year 2006, a year of rapid remittance growth. This bore the seed for credit boom

²¹ Fajnzylber, Pablo and J Humberto Lopez, eds. 2007, *Closer to Home* (Washington: WorldBank), p.18.

too. Money supply kept on accelerating till 2008-2009. Liquidity also rose between 2005 and 2009, so fast as to lead to liquidity crunch after 2009.

Increase in money supply leads to increase in general price level of an economy. In other words, too much money in an economy invites inflation. This is exactly what happened during this phase. General Price level went up and the rate of inflation was higher. Inflation has severe impact in developing countries such as Nepal because alongwith reduction in purchasing power of money, it also leads to uneven distribution of wealth. Remittance itself is a cause of inequality of wealth as not all people receive money from abroad.

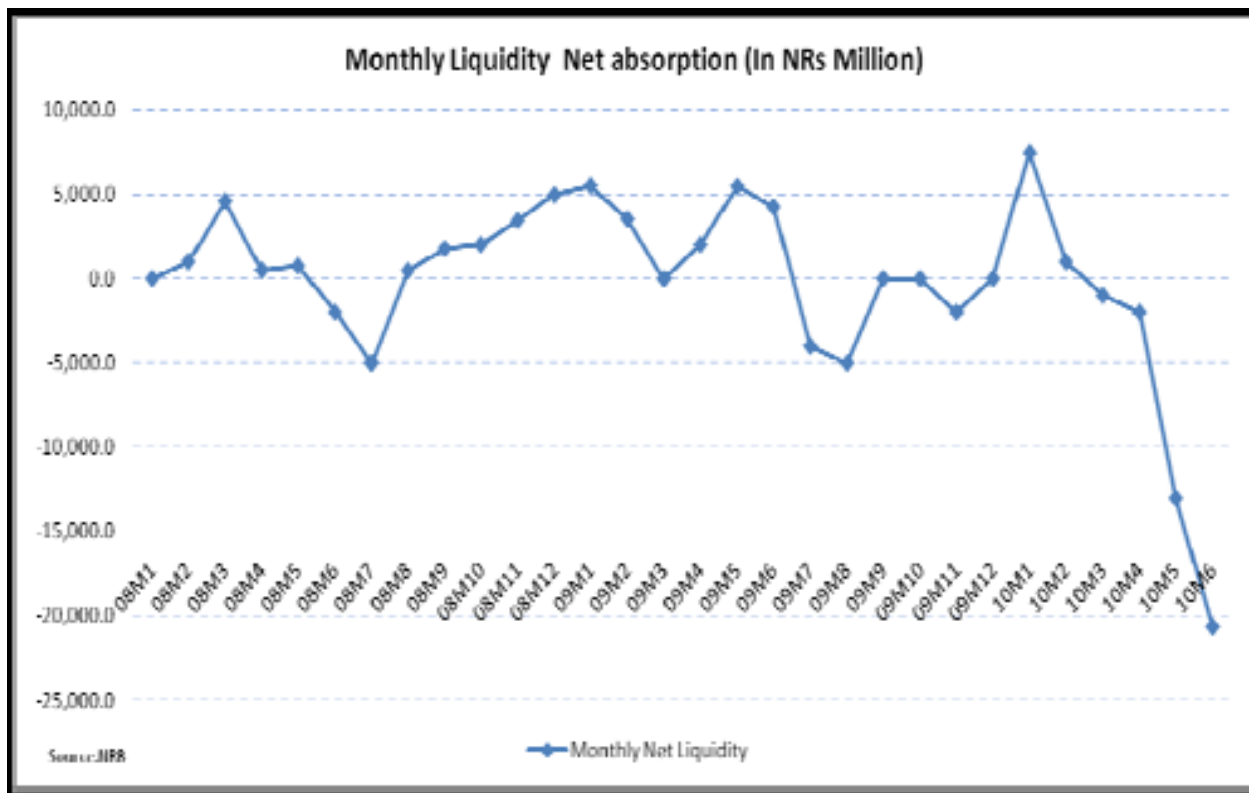


Source: Nepal Rastra Bank

Asset Bubble

The banking crisis of 2011 that caused a massive stir in the financial market of Nepal evolved from asset price bubble which was fueled by large inflow of remittance. Banks failed to adopt necessary risk management techniques to counter ensuing liquidity crisis and regulators could not formulate effective policies to check increasing risk-taking behavior of banks. Due to lack of availability of adequate and sustainable investment opportunities, banks invested their money in real estate which led to artificial boom in price .The bubble was not entirely national but it was created where most of the wealth of the country was concentrated: the Kathmandu Valley. Land prices jumped in almost all the regions of Kathmandu valley and suddenly the residents of the valley seemed to be wealthier, purely based on price increase. When the bubble burst the asset prices came crashing down, there was escalating panic and furor all over the valley especially in the heart of the country, the capital, Kathmandu city.

As previously discussed, there was a surge in credit growth contributed largely by inflow of remittance from abroad. Rising risk tolerance can be observed from the fact that the banking



industry concentrated their investment in real estate sector of Kathmandu Valley. Not only there was credit risk but also concentration risk in the portfolio. High liquidity can be observed from the fact that real estate transactions from the period 2005-2010 were very high. Buyers could easily obtain loans from the banks to buy a piece of land. Sellers could unload their real estate at reasonable prices quickly. This suggests that there was high liquidity in the market.

As seen in the figure, liquidity has persisted to stay high from the year 2008 to mid-2010. After 2010, banking industry faced severe liquidity crunch because the bubble burst. Many

development banks were in the red and the central bank had to intervene in the market to bring some stability and order.

The obvious question that arises from all this is how was asset bubble created? An asset bubble can be defined as the phenomenon of asset price increasing continuously for a period of time which then crashes suddenly.²² During that period, market participants believe or rather expect that prices will continue to rise in the future; hence they are willing to take risk. But not all increase in prices can be linked to bubble especially if they are justified by economic fundamentals. For example, continuous increases in the price of land in the eastern region of Nepal where precious metals were discovered may not be unwarranted. When there is a bubble, there is a huge discrepancy between the observed or the market price of the asset and the price dictated by economic fundamentals. Unfortunately it is very difficult identify a bubble and even though a bubble is identified with certainty, policies and strategies that deflate the bubble adequately cannot be formulated quickly without disturbing the stability of the financial system.²³ Therefore even though Nepal Rastra Bank had identified real estate bubble when it was forming, they could not adopt precautionary measures. Rather, they concentrated on damage control.

Bubble formation has a lot do with expectations of future prices. In case of Nepal, when there was a rapid expansion in the inflow of remittance, early buyers had more money at their disposal which increased their purchasing power. When people have more money than they are used to having, they make expenditures they always desired to make. In that regard, land holds a special

²² Jalilvand, Abol and A.G Malliaris. "From Lessons From The Financial Crisis: Causes, Consequences, and Our Economic Future." In Sequence of Asset Bubbles and the Global Financial Crisis, Edited by Robert W. Kolb, 139-145. John Wiley and Sons, 2010.

²³ Ibid.

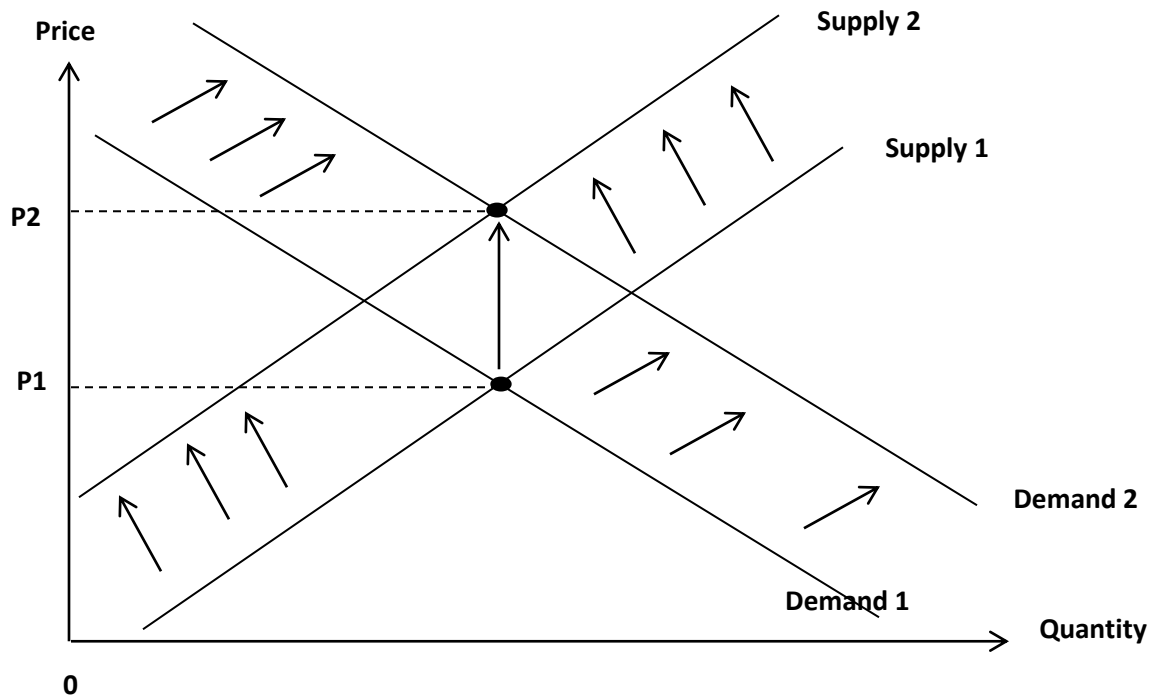
place in the hearts of Nepalese people because about 80 percent of the general population has agriculture as their primary source of income. People receiving remittance invested their money in buying pieces of land to build houses, grow crops or even raise cattle. Increased buying led to price increase in real estate assets. Other buyers, when they saw price increasing in the present, shifted the demand curve further to the right with the hope that prices would continue to increase in the future.

Sellers who realized that price of assets was going up then, could make more money in the future by not selling their assets then and preserving assets for future sale. They also shared the same view that prices would continue to increase in the future. This practice led to supply curve shifting to the left. Now, the cumulative action of rightward shift in the demand curve and leftward shift in the supply curve increased the price of the asset.²⁴ The entire phenomenon appeared to be self-fulfilling as majority of market participants believed that prices would continue to rise and acted accordingly. As the prices increased, a new cycle began with buyers and sellers bearing same expectations about the future prices of assets. This process formed a bubble that inflated until the market realized that the true worth of the asset was far less than its price. The bubble burst and prices nosedived.

Suddenly, when the prices plunged people realized that value of their wealth had decreased significantly. In the context of Nepal, the primary wealth of people own is land and house. Banks provided loans to people who wanted buy lands and houses and sell them in the future at higher prices. Even banks got involved in such transactions to increase profits but suddenly found themselves in trouble when the bubble burst. Default rates went up and liquidity crisis ensued as banks struggled to get their money back from creditors.

²⁴ CFA Institute (2012), CFA Economics, Basic Concepts and Principles, CFA Institute Pearson, p.27.

The following diagram shows how the price rose and ultimately formed a bubble.



Comparison of Real Interest Rate

Nepal is a land-locked country surrounded by India on three sides and China to the north.

Nepalese economy cannot be analyzed without considering massive influence of India, the South Asian giant. India with its rapidly developing capital markets is already emerging as one of the economic leaders in the future. Despite rapidly increasing population, India has one of the highest economic growth rates in the world. India is also making swift advancement in technology and has now been producing some of the best human capital in the field of technology. In such a favorable scenario for growth, there is a lot of potential for Nepal to gain from India's advancement towards sustainable development.

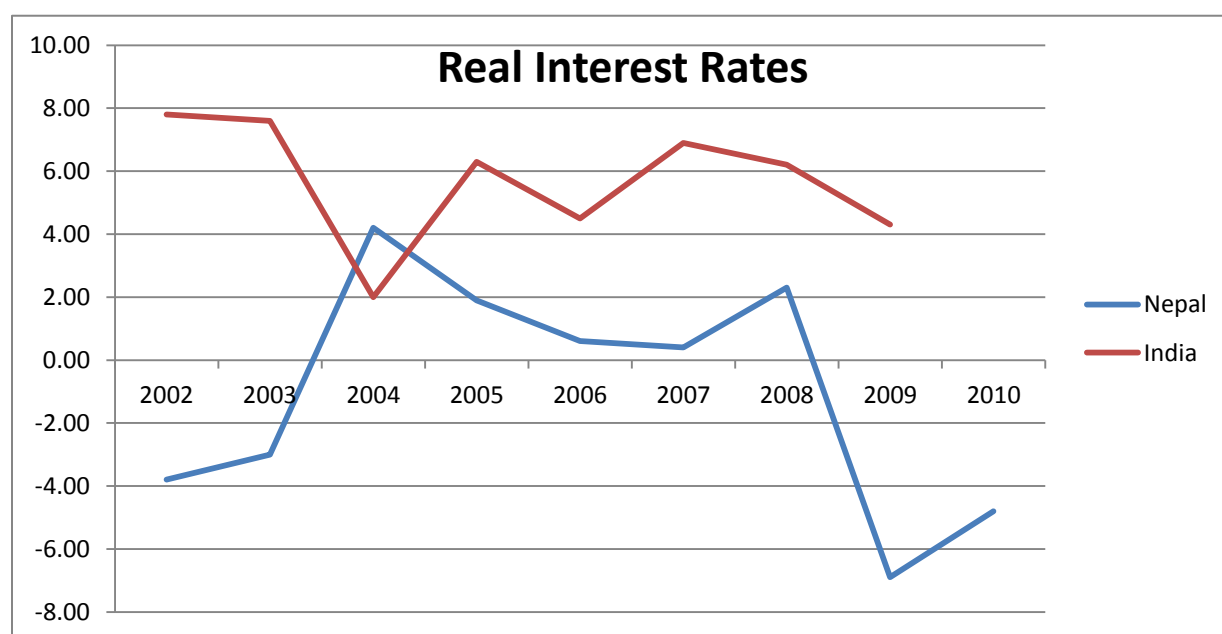
Nepalese economy is heavily dependent upon Indian economy. Nepal's largest trading partner is India with whom Nepal conducts around 80 percent of trade.²⁵ Nepalese currency is also pegged against Indian currency. This policy has been adopted to bring macro-economic stability. Nepal also adopts open border policy with India which has allowed goods and services to move freely across the border. Due to all these strong economic linkages, Nepal inevitably "imports" inflation from India. Price increase in India is certain to increase prices in Nepal too. Therefore, it becomes logical to compare real interest rate of Nepal with that of India rather than with the real interest rates of other countries.

From the year 2005-2010, mushrooming of financial institutions and rapid credit growth can be attributed to weak supervision and lax monetary policy.²⁶ Loose monetary policy kept the real

²⁵ Nepal Rastra Bank, "Monetary Policy Report 2009", Kathmandu: Nepal Rastra Bank.

²⁶ Peiris, Shanaka J. (2008), "Nepal: Selected Issues", IMF Staff Country Report No. 08/182, Washington: International Monetary Fund).

interest rates low in comparison to India which exerted pressure in the equilibrium of Nepalese-Indian currency.²⁷ But the decreasing real interest rates encouraged credit growth in the country. Banks invested large sums of money in the private. Real estate sector emerged as the most promising business idea because political instability in the country has stalled progress in most the business sectors. Too much money chasing the real estate sector fueled the bubble eventually.



Source: The World Bank Database

The real interest rate was decreasing continuously after 2004 till 2008. There was no significant real cost of borrowing in that period of time. Liberal monetary policy allowed many financial institutions to operate at the same time. In the quest of making greater borrowings and lendings, banks began to take higher risks. Herding behavior commenced as banks matched each other's risk taking behavior which made the system vulnerable.

²⁷ World Bank (2010), "Nepal Economic Update", Economic Policy and Poverty Team, South Asia Region. Washington DC: World Bank.

Turmoil in Real Estate Market

Liquidity crunch that led to banking crisis in 2011 has been blamed on housing and real estate market. The logic put forward by the analysts was that too much cash and money was devoted to realty market by financial institutions and when the active participants in the market could not repay back the money, there was a liquidity crisis.²⁸ Applying basic law of demand, we know that when there is high demand for certain entity the price goes up. In Nepalese scenario, real estate price went up when investors started chasing real sector assets. Consequently prices of real sector assets went up but the financial institutions did not stop making transactions in realty market. Since the price was higher, there was a higher potential for profits. So, insensitive financial institutions began doling out easy and cheap loans. The loans were cheap in the sense that prices were going up in that period from 2005-2010 and borrowers could repay the loans back by selling the assets and still keeping a profit margin.

When the bubble burst finally, the prices came crashing down and a number of people lost value in their assets. It turned out that investors were paying more for something that was valued less in the existing market. Consequently, default rates went up, which led to liquidity crunch because the money was not flowing back into financial institutions from where loans originated. A number of banks which relied on making profits from investments in real estate market ended in red as they could not get collect all their returns. That is when alarms started ringing in the financial market.

²⁸ Sharma, M. M. (2011, June 9), "Sinking Vibor Bank Seeks Mgmt by NRB", Republica Daily, p. 8.

According to a survey conducted by the Research Department of Nepal Rastra Bank, primarily to analyze exposure of banks to real estate, real estate and housing sector has been ranked number one lending sector by the respondents.²⁹

Institution	Percentage of Real Estate Value Approved as Collateral
Commercial Banks	71.44
Development Banks	65.00
Finance Companies	59.48

Source: Real Estate Survey, 2011

In 2009 alone, Rs 247 billion worth of loans were lent against collateral of building and land. This amounts to 61.44 percent of total loans made by the commercial banks. What is even more shocking is total loans made against collateral of land and building is about 50 percent of the total loans of the whole financial system.³⁰ This also means that when the bubble burst, it had the potential to disrupt half of the loans made in Nepal. No wonder the repercussion of the bubble bursting was intensely scary for all the banks whose portfolio was jammed with real estate investments.

The survey also identified some of the major reasons that fueled the growth of real estate loans. The four most popular were rapid urbanization, lack of alternative investment opportunities, speculation and low interest rate.

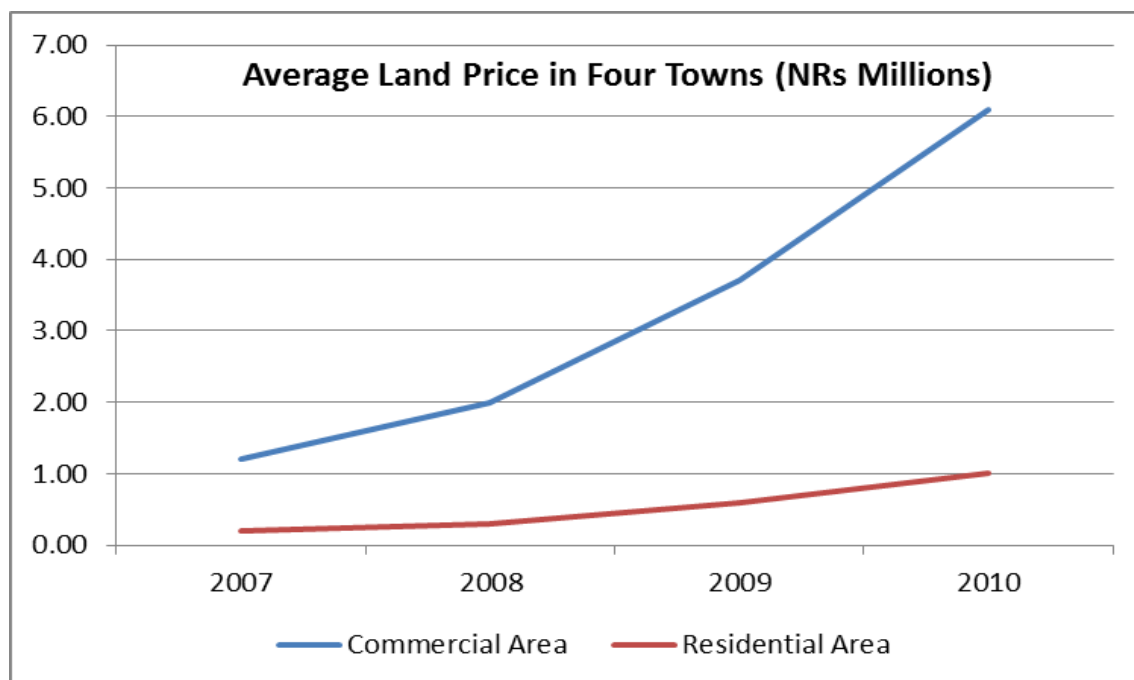
²⁹ Nepal Rastra Bank (2011), "A Report on Real Estate Financing in Nepal: A Case Study of Kathmandu Valley", Kathmandu: Nepal Rastra Bank.

³⁰ Nepal Rastra Bank, "Economic Activities Study 2011", Kathmandu: Nepal Rastra Bank.

Rapid urbanization has emerged as one of the biggest socio-economic problems of Nepal. The rate of migration from villages and small towns to cities has increased dramatically mainly due to political instability and lack of job opportunities.³¹ Due to Maoist insurgency in the early 2000, thousands left their villages and towns to settle in the most secure part of Nepal, the Kathmandu valley. There was a sudden growth of population in the Kathmandu valley and naturally the demand for land and housing went up to accommodate the migrants. Even after political tensions were over, the migration rate did not go down significantly because youths migrated to the cities for college education and work. Migration to the urban areas will not decrease until there are ample opportunities for families in the rural areas.

There is lack of alternative investment opportunities in Nepal. The business climate has been severely disrupted by political instability. Businesses had to incur heavy losses due to political strikes that regularly closed down all the on-going activities. Sometimes strikes would go on for days. Government national plans could not be carried out smoothly due to political deadlock. In all this turmoil, real estate sector emerged as a safe landing for banks and financial institutions because of the rising demand for land and houses.

³¹ Tiwari, Indra P. (2008, April), "Urban Migration and Urbanization in Nepal", *Asia-Pacific Population Journal*. Vol.23, No. 1.



Source: Data taken from Real Estate Survey, NRB

The land prices in commercial areas have increased six fold in 3 years. Most of the banks would then be happy because of the rising value of the collateral. However, after 2011 the land prices started falling down once the bubble burst. There were reports of land prices going down by half in certain parts of the Kathmandu valley.³² Realtors realized that the land prices were overvalued and the public was cynical about price stability in real estate sector.

Nepal Rastra Bank has developed strong initiatives to curb the deteriorating situation of financial system. The central bank mandated banks to reduce combined real estate and banking loans to 30 percent in 2011 and 25 percent in 2012.³³ As a result, risky housing and residential loans have gone down. Balance sheets of banks today carry less risk from real estate price movements. The survey provides us the immediate effect of the directives given by the NRB.³⁴

³² Sharma, M. M. (2010, Dec 8), "Realtors cut Prices upto 30%", Republica Daily, p. 8.

³³ Nepal Rastra Bank. Monetary Policy Report 2011. Kathmandu: Nepal Rastra Bank.

³⁴ NRB had given directives in its published Monetary Policy 2010/11

Institutions	Real Estate Loan Approval Before Mid- January 2010	Real Estate Loan Approval After Mid-January 2010	Percentage Decrease
Commercial Banks	8	5	37.50
Development Banks	7	5	28.60
Finance Companies	14	9	35.70

Source: Real Estate Survey 2011³⁵

The survey also points out that the majority of public believes that current movement in prices is due to the asset bubble. Therefore, most consumers will conduct thorough research before making huge investments in lands and houses. Real estate loans will decrease further in 2012 because of liquidity crunch and stringent NRB regulations. NRB will keep the interest rates high, not only to curb credit expansion but also to bring down inflation that is hovering around in double digits.³⁶

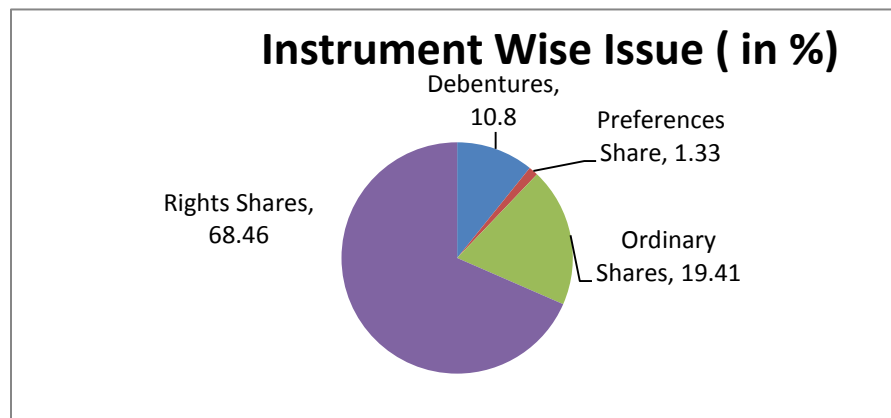
³⁵ The survey contains data until July 2011. Therefore, all the data acquired from Real Estate Survey is valid for July 2011 only. Official data for 2012 is not yet available.

³⁶ Ministry of Finance, “Economic Survey Fiscal Year 2010-2011”, Kathmandu: Ministry of Finance.

Stock Market

The Nepalese Stock Market crashed in the period from 2005-2009 and everyone was left asking if it was a random event, if the crash was the result of other financial activities or if it was just a part of the business cycle? Basically, Nepalese stock market mirrors the progress of Nepalese banks to a large extent. Not surprisingly then, the share market booming at 1175 points on August 31, 2008 plunged to 455 points within merely over two weeks.³⁷ Investors started losing confidence in the stock market.

Composition of stock market in Nepal is very different from stock markets around the world. Financial sector alone contributes over 75 percent of the share value whereas other sectors contribute around 25 percent. Therefore, health of financial sector is very crucial to the progress of stock market. The composition and maturity of capital market are also dissimilar to capital markets of other countries.³⁸



Source: Annual Report 2010, Securities Board of Nepal

³⁷ Nepal Stock Exchange Limited, "Annual Report 2008-2009", Kathmandu: Nepal Stock Exchange Limited.

³⁸ Poudel, Yoga Nath. "Real Estate Bubble Burst." 1Ropani.com. N.p., n.d. Web. 5 Jan. 2012. <<http://www.1ropani.com/news/Default.aspx?ID=97>>.

Nepalese stock prices are considered to be highly volatile. According to the research paper “Volatility Analysis of Nepalese Stock Market” NEPSE Index has a huge difference between its maximum and minimum returns and the standard deviation is also very high. It has also been shown that NEPSE has non-symmetric returns and there is presence of negative skewness. This is not great news because it means that there is a high chance that some of the stocks can give negative return earnings. The study revealed strong evidence of time-varying volatility, a tendency of the periods of high and low volatility to cluster.³⁹

The rise in the stock prices after 2005 was caused by financial transactions made by banks especially in the real estate sector. Much of the increase in the prices can be attributed to some serious speculation made by some market participants. The entire market is influenced by baseless hearsays and rumors floating around. Capital market of Nepal is still in its infant stage as compared to the markets around the world. That is why rumor-mongers use this disadvantage of lack of experience and preparedness to breed rumors for short term profits. Markets are easily manipulated to misguide the public. Often, the victims are not the big players but small investors who have limited funds to invest.⁴⁰ There seems to be inordinate amount of speculation which causes movement in the stock market.

Nepalese stock market is not shielded completely from outcomes in the global market. Often, investors make their decisions based on happenings in the global market which has minute bearing in the Nepalese market. There is large misconception about how stock markets work.

³⁹ Surya Bahadur, G.C (2008), “Volatility Analysis of Nepalese Stock Market”, Journal of Nepalese Business Studies, Vol. 5, No.1, p 76-84.

⁴⁰ Singh, Shankar Man, "Falling NEPSE Index: A Reality Check" Nepalnews. N.p., 29 Dec. 2011, Web. 30 Dec. 2011, <<http://www.nepalnews.com/home/index.php/guest-column/15603-falling-nepse-index-a-reality-check.html>>.

Many investors think US market crisis will always bring down Nepalese stock market. Such misconceptions actually can be self-fulfilling as stock markets work on public confidence and behavioral aspects of investors. There is acute need of investment education to the public especially ones who are involved in investment and finance sector.

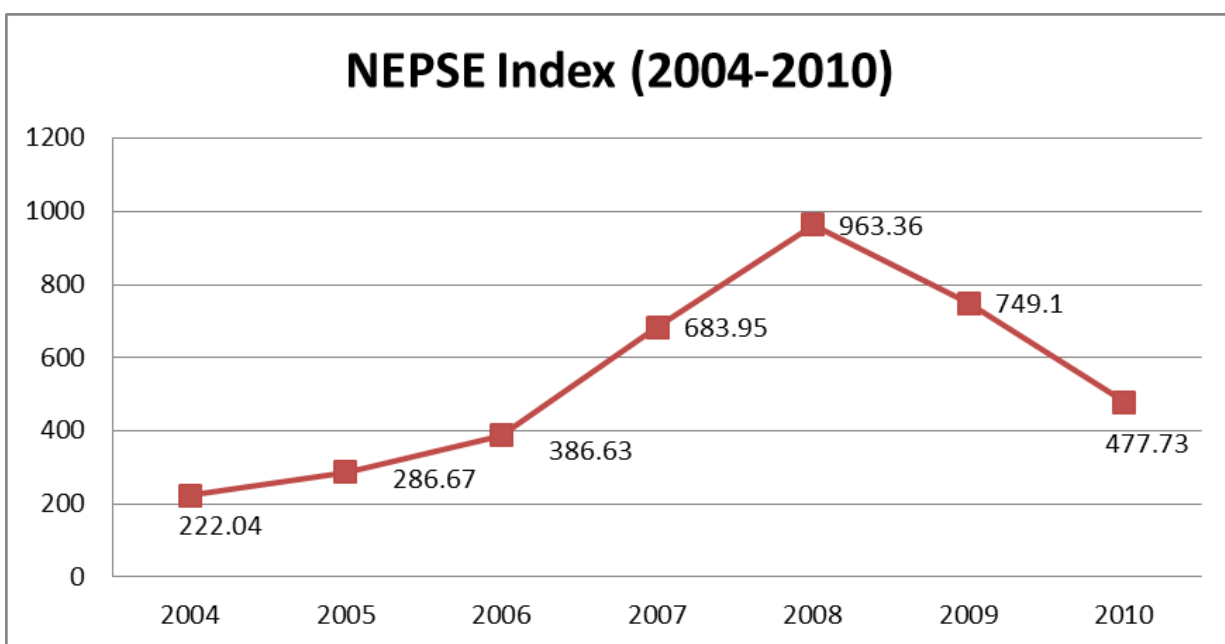
The stock market boomed in the year 2008 when NEPSE Index jumped over 300 points from the last year. However, there was also a growth in margin lending around the same time. Margin lending is a new concept in stock market history of Nepal. Margin lending involves loans extended to shareholders against share certificate as collateral. When the stock market peaked, margin lending reached historic high at 5 percent of the total loan portfolio and 30 percent of the stock market.⁴¹ Margin lending introduces additional risks to the balance sheets of the banks. There were some banks such as Nepal Credit and Commerce Bank that had over 8 percent of their collateral in the form of shares and stocks.

“In addition, the regulatory cap on margin lending loan at 100 percent of core capital against the collateral of shares is generous by international standards, especially considering the high volatility of Nepal’s equity prices. Also, as the stock market is dominated by shares of financial institutions, increased margin lending gives rise to the risk of a negative feedback loop between stock market volatility and banking sector soundness.”⁴²

⁴¹ Pitt, Ariyapurchya, Maino, Yu (2010), “Nepal: Selected Issues”, IMF Staff Country Report No. 10/184. (Washington DC: International Monetary Fund).

⁴² Ibid

A recent study conducted by the government to analyze risk of margin lending concluded that the largest borrowers of margin lending are the promoters of commercial banks themselves.⁴³ This is particularly a dangerous situation because there is incentive for the banks increase the share prices by artificial manipulation. Higher share prices will enable banks to borrow greater quantity of money. The study has explicitly stated that margin lending and the role of banks to create artificial effect is the main cause for unnatural movements in the share prices. Banks were more active in this kind of business when real estate market was heating up because the stakes were higher and there was a greater possibility of profits



Source: Data available Nepal Stock Exchange Limited

With the rise in credit growth, the stock market also took a leap. There was an increase in margin lending too in the portfolio of banks. Since bank shares make up the majority of the stock market, the prices went up to facilitate margin lending. When prices of bank shares went up, the

⁴³ Khanal, Prem (2012, March 9), "Bank Promoters Biggest Borrowers of Margin Lending", Republica Daily, p.8.

stock market gained points and reached peak in 2008. But as credit growth slowed and real estate market started cooling down, banks struggled because of their investments in real estate sector. The share prices also came crashing down after a steep climb. The overvalued stocks fell to their real value.

Plight of State Owned Banks

The two largest public banks of Nepal are Nepal Bank Limited and Rastriya Banijya Bank.

These banks hold about 20 percent of the total banking sector assets.⁴⁴ They are also the oldest commercial banks of Nepal. However, in the last 15 years these banks have been struggling to maintain efficiency and productivity. Although these banks have been making minor profits in the recent few years, questions have been asked about their soundness and health. It is imperative that these state-owned banks perform fairly well given the fact their health has a major impact on the well-being of the entire banking industry.

In 1998, an organization named KPMG Barents Group conducted a diagnostic study and announced the ill-state of these banks. They claimed that the banks would need recapitalization of worth Rs 25 million to Rs 30 million to rectify the deteriorating condition. In the same year the government also reduced its share in Nepal Bank Limited to 41 percent. It maintained its full control over Rastriya Banijya Bank though. It is also the largest commercial bank in the country with maximum number of branches over the country. The management of these banks has been handed to foreign groups and the World Bank has been granting continuous assistance to improve productivity of these banks.⁴⁵

Even after the restructuring process under the leadership of the World Bank, these banks have been bearing negative net worth in the last few years. The main reason for increasing liabilities is extraordinarily high non-performing loans (NPLs). High level of NPLs has exerted enormous

⁴⁴ Pitt, Ariyapurchya, Maino, Yu (2010), "Nepal: Selected Issues", IMF Staff Country Report No. 10/184(Washington DC: International Monetary Fund).

⁴⁵ Chowdhury and Shrestha (2007), "The Impact of Financial Liberalization on Welfare: Evidence from Nepal", Applied Econometrics and International Development.

pressure in the capital base of these banks. Profit margins have been squeezed significantly. NPLs decreased in the recent years mainly because total debt increased during the boom and large write offs have also been made.⁴⁶ Banks have made efforts to improve the situation of NPLs. It has been seen in the recent years that most of the big loan defaulters had political ties; hence judicial actions against the non-payers was difficult. In 2003, some important reforms were introduced in debt recovery especially to counter rising NPLs, such as blacklisting directives, the Debt Recovery Tribunal and the Appellate Tribunal. This has helped to tackle minor offenders but recovery of larger sums of money was still a herculean task. Defaulters of larger loans often tend to seek support from political parties that have powerful influence in policymaking. Banks have even attempted to seize collateral from defaulters but it seems, without strong political will this situation is hard to reverse.⁴⁷

There seems to be a serious flaw with lending mechanism of public banks. Although reforms in loan recovery process have improved credit evaluation practices, still there is a lot to be desired in this field. A rule-based approach needs to be replaced with practical approach. Due to lack of expertise and inability to upgrade with the technology, the bank administrators have not honed some crucial skills. The management has failed a number of times in proper evaluation of a project scheme or idea. Large loans have been handed out solely based on collaterals without much analysis of the credit history of the lender, the viability of the project, or the lender's ability to run the project. Banks do not have effective screening mechanisms to rule out inept borrowers or incompetent projects. In the case of government owned banks, some borrowers

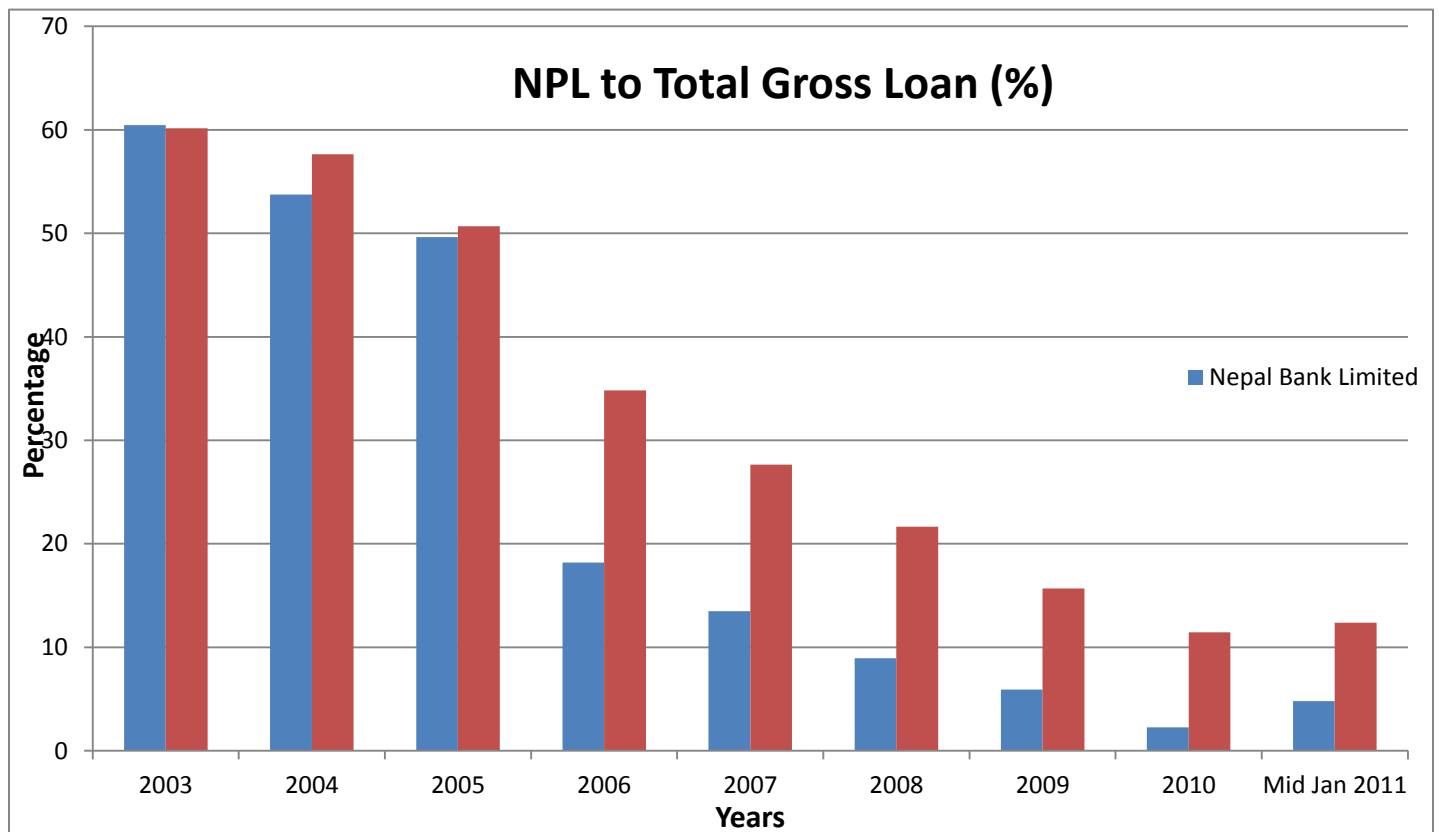
⁴⁶ Panta, Radhesh (2008), "Challenges in Banking: A Nepalese Diaspora", Socio-Economic Development Panorama.

⁴⁷ Pitt, Ariyapurchya, Maino, Yu (2010), "Nepal: Selected Issues", IMF Staff Country Report No. 10/184(Washington DC: International Monetary Fund).

acquire heavy loans by putting political pressure from government officials on bank officers.

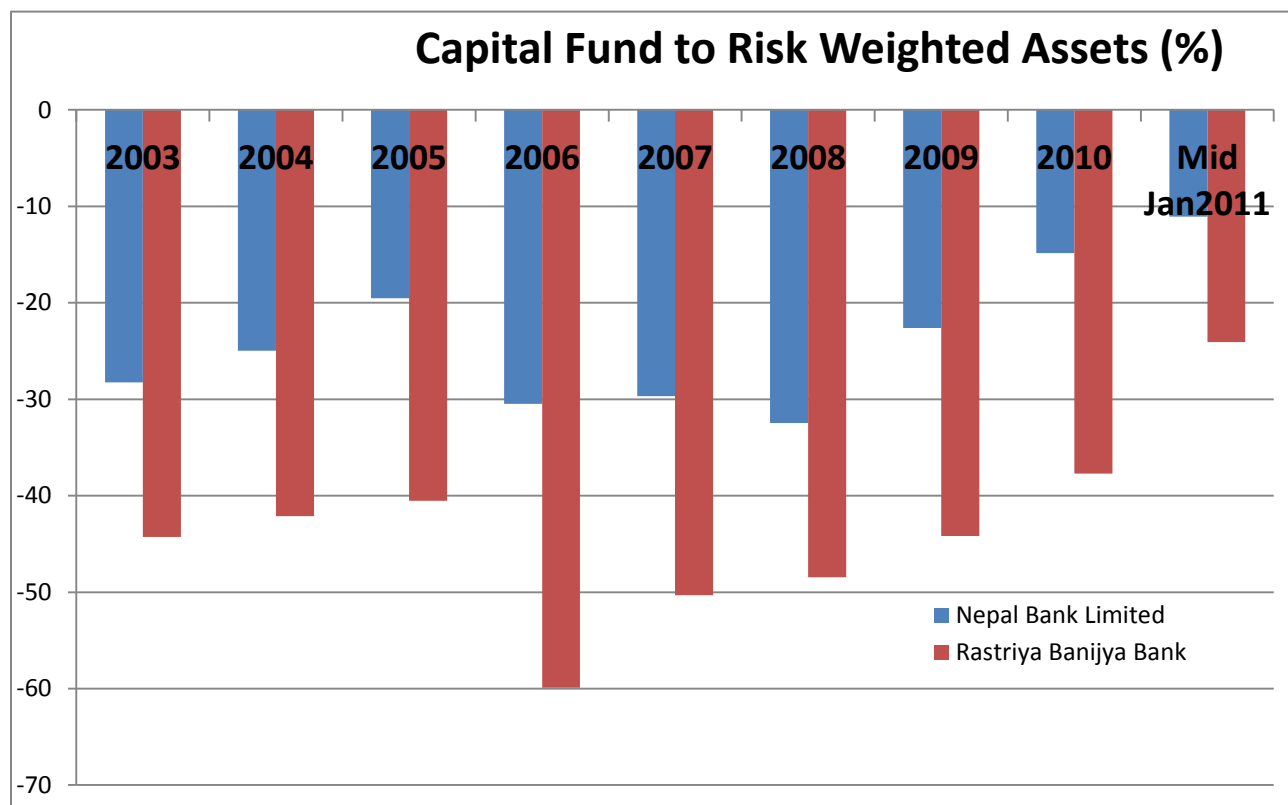
Such borrowers usually have more incentives to default on their loans.

If we analyze a couple of bank soundness indicators, we get some idea about the problems the largest two state-owned banks are going through.



Source: Banking and Financial Statistics, Nepal Rastra Bank

From the figure, we can deduce that ratio of NPL to total gross loan is going down, basically because a large number of loan write-offs has been made. Also, we cannot ignore that total gross loans have also increased. After 2005, there was a significant reduction in the ratio because credit boom was brewing up. In the present, the ratio is far less than in early 2000s but it is still very high by industry standards.



Source: Banking and Financial Statistics, Nepal Rastra Bank

The above figure clearly shows sorry state of affairs of Nepal Bank Limited and Rastriya Banijya Bank. These banks have negative capital funds from the year 2003. They have been bearing negative retained earnings. Again, 2006 was far worse because of large borrowings to invest real estate sector. Compared to the industry, the performance is far too low. While most of commercial banks enjoyed retention of solid capital funds in their balance sheets, the two oldest and most experienced banks had negative worth. Failure of these banks to maintain healthy balance sheets has added more vulnerability to already fragile banking industry. Immediate measures must be taken to eradicate any chances of sudden collapse.

- What should be done in the future?

The two banks need to be recapitalized appropriately and proper control on lending practices should be imposed effectively. . Loan portfolio must be carefully evaluated and analyzed to deliver economic justification to the real value of the portfolio. Politically motivated lending must be discouraged to reduce default rates. Recapitalization will inject more funds to these banks and possibly block the leakages too. All this can lead to higher economic growth in the banks.

“Financial institutions should initiate and expand the process of establishment of Assets Management Companies (AMCs) who help collect loans repayment. These steps would help the process of debt restructuring. The functions of AMC should be explicitly focused on purchase, restructure and sell the assets and receivables of financial institutions. Setting up AMC makes the loan recovery business professional and competitive. In addition, government should hence grant such companies generous tax perks when acquiring bad assets from financial institutions and selling them onto the third parties.”⁴⁸

There are important lessons to be learnt from the banks of China and Japan which were also struggling a few years back. New policies and sound management techniques helped these banks to be back on their feet. Laws were formulated to establish Asset Management companies and to create foreign equity participation and asset backed securitization. Japan reorganized their accounting standards and made it more compatible with international accounting standards. India also strengthened their legal and prudential norms to improve compatibility with international

⁴⁸ Panta, Radhesh (2008),”Challenges in Banking: A Nepalese Diaspora”, Socio-Economic Development Panorama.

standards.⁴⁹ Nepal also needs to make swift reforms to encourage safe lending practices and to improve capital adequacy.

⁴⁹ Panta, Radhesh (2008), "Challenges in Banking: A Nepalese Diaspora", Socio-Economic Development Panorama.

Behavioral Basis

During the period from 2005-2010, several causes as discussed combined together in the banking industry to create liquidity crisis which forced several major banks to fail. There were some poor investment decisions made by the banks. Even the government let their guard loose while liquidity crisis was brewing. Active lenders and creditors did not analyze persistent risk in the market properly. We fail to question why did market participants made such decisions that led the industry to the disaster? Why did the mass fail to act rationally and prevent an impending disaster? In retrospect, we tend to examine how market participants should have made the decision but we make minimum effort to understand how those crucial decisions were actually made. We need to understand then prevailing mindset of the active parties to prepare ourselves for future challenges. Therefore, through examination of behavioral basis, we can make inroads in understanding the circumstances that forced people in financial markets to come to decisions which were not quite at best.

“Risk management should encourage profitable risk taking while discouraging unprofitable and catastrophic risk. Our existing risk measures account for perhaps 95 percent of what occurs. The major catastrophic risks lurk in the fat tails of the remaining 5 percent. We tend to underestimate these improbable risks because of probable biases.”⁵⁰ Banks in Nepal may not be shielded by risk measures so strongly as to ward off 95 percent of risk hovering around but what hurt the industry were the risks creeping around in the fat tail of the curve. Such risks can be explained partially through behavioral science because it explains risk decisions made by individuals. Market

⁵⁰ Rizzi, J.V, “From Lessons From The Financial Crisis: Causes, Consequences, and Our Economic Future”, Behavioral Basis of the Financial Crisis, Edited by Robert W. Kolb, 139-145, John Wiley and Sons, 2010.

participants exhibited certain behavioral characteristics which demonstrate how they made those decisions with regards to financial markets.

- Overconfidence:

Banks displayed overconfidence during the period leading to the turmoil. “Overconfidence occurs when we exaggerate our predictive skills and ignore the impact of a chance or outside circumstances.”⁵¹ There was an unhealthy competition between banks to increase depositor base. Banks competed with each other by offering extremely high interest rates to attract more depositors. Managers put too much faith in their knowledge of banking industry while taking significant amount of risk to magnify profits. They believed that they could manage or control high risk without any real cost to their business. Underestimation of severe consequences and exaggeration of unusual gain potential defined the mindset of bank managers.

- Herding:

Herding was witnessed in large magnitude among market participants of Nepal. “Herding occurs when a group of individuals mimic the decision of others.”⁵² It occurs with great force in Nepal because majority of population live in rural areas where there is dominant presence of communal living. The structure of the society is such that it breeds expectations towards individuals living in it. Therefore, due to social pressure to conform individuals suppress their rationality and conform to the decisions of the majority to avoid looking bad. It is common in Nepal that people often prefer to emulate their neighbors while making investment decisions. Herding also has a

⁵¹ Rizzi, J.V, “From Lessons From The Financial Crisis: Causes, Consequences, and Our Economic Future”, Behavioral Basis of the Financial Crisis, Edited by Robert W. Kolb, 139-145, John Wiley and Sons, 2010.

⁵² Ibid

big role to play in creation of asset price bubble because when a group think alike and expects the prices to rise continuously in future, individuals agree to it and act accordingly. Herding explains why different banks continued to pour money in real estate despite knowing the fact that perennial increase in prices was not sustainable.

- Extrapolation bias:

Extrapolation bias was one of the bases of formation of real estate bubble. “Extrapolation bias occurs when current events or trends are assumed to continue into the foreseeable future independent of historical experience, sample size, or mean reversion.”⁵³ Nepalese investors believed that prices could go up only and that is what they expected to happen in the foreseeable future. For some time, prices continued to go up and the bubble inflated. This reinforced their earlier expectations and more money was invested in the real estate sector. The belief reached to the point that prices can never stop increasing. They did not analyze past experiences of other places because their expectations were being fulfilled for some time. In these cases, extreme consequences are ignored which actually hurt the market in the days to come.

⁵³ Rizzi, J.V, “From Lessons From The Financial Crisis: Causes, Consequences, and Our Economic Future”, Behavioral Basis of the Financial Crisis, Edited by Robert W. Kolb, 139-145, John Wiley and Sons, 2010.

Conclusions and Reflections

In 2011, Nepal witnessed several bank crashes one after another causing severe panic in the general population. It was the first time when more than eight major banks got into serious financial trouble in the history of Nepal, a challenge that central bankers had never encountered. Nepal Rastriya Bank, the central bank, responded to the task by injecting liquidity into the market and introducing a few reforms to maintain stability in the banking industry. Going a few years back, data analysis shows that the banking crisis was brewing up. There were unusual changes in the years from 2005 to 2010 in the banking industry that would suggest that a disaster was impending.

From 2005 to 2010, there was rapid credit growth. Banks were growing in big numbers especially finance companies and development banks. With the rise in the number of financial institutions, borrowing and lending activities also increased. Sudden rise in credit growth was a clear signal of approaching credit boom which when burst could bring disastrous consequences to the entire industry.

The expansion in credit from 2005-2010 can be attributed to sudden increase in remittance. Many Nepalese citizens have left their country in search of better employment and education opportunities abroad. They send money earned abroad to their families in Nepal which has increased purchasing power of the recipients. Banks have indulged in cut throat competition to attract remittance recipients by offering unusual interest rates. Such practice had introduced several kinds of risks that were detrimental to the health of the banking industry.

The main cause of the banking crisis was the bursting of the asset bubble. When banks, short of investment opportunities due to political instability, poured enormous amount of money in the real estate market prices of land and houses soared up. Market participants believed that prices would only go up, which caused artificial inflation of prices. When the market reacted and stabilizing forces were in action, prices came crashing down. Banks lost large amount of money in their loan and investment portfolio.

Analysis of real interest rate shows that real interest rate of Nepal was lower from 2005 to 2010 in comparison to the neighboring countries especially India. Lax monetary policy also assisted in the creation of asset bubble as rate of credit growth was high. Real estate market underwent several changes from 2005 to 2010. There were more house loans and land loans acceptances than any other period in the history of Nepal. Although number of direct loan to real sector was far less, indirect loan in the form of collateral was excruciatingly high.

Stock market reached record high in the year 2008 and the market values came crashing down. Rapid expansion in credit growth had increased activities in the stock market but when the growth seemed unsustainable, there was a stock market crash. Margin lending was also identified as one of the problems as it provided space for artificial manipulation of prices.

Two largest state-owned banks which hold around one-fifth of the total bank assets have been bearing losses for years. Several attempts have been made to rectify miserable situation of these banks but there are some inherent problems which need to be tackled first to improve their health. These banks need to be restructured as soon as possible.

Behavioral finance tells us certain attributes about the public. Analysis of behavioral basis is important to understand why and how the decisions were made by the bankers, depositors,

investors and other stakeholders. Overconfidence was exhibited by bank managers during the period of turmoil. Herding behavior was largely prevalent in Nepalese investors. People were also guilty of extrapolation bias.

From the analysis of the period from 2005 to 2010, we can see that banking industry was heading in the wrong direction. There was mismanagement of growing funds which were invested heavily in realty market without much diversification. Lack of clear vision and lack of experience were evident among the policy makers and managers of financial institutions. Proper risk management techniques need to be installed to reduce losses from asset bubble burst and mismanagement of funds.

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Appendix

Types of Financial Institutions	Mid-July											Mid-Jan
	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011
Commercial Banks	2	3	5	10	13	17	18	20	25	26	27	30
Development Banks	2	2	2	3	7	26	28	38	58	63	79	87
Finance Companies				21	45	60	70	74	78	77	79	79
Micro-finance Development Banks				4	7	11	11	12	12	15	18	21
Saving & Credit Cooperatives				6	19	20	19	17	16	16	15	15
NGOs (Financial Intermediaries)					7	47	47	47	46	45	45	45
Total	4	5	7	44	98	181	193	208	235	242	263	277

Source: Nepal Rastra Bank. (2011). Banking and Financial Statistics. Kathmandu: Nepal Rastra Bank.

APPROVAL SHEET

This is to certify that Manish Sapkota has successfully completed
his Senior Honors Thesis, entitled:

Trend Analysis of Nepalese Banks from 2005-2010

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